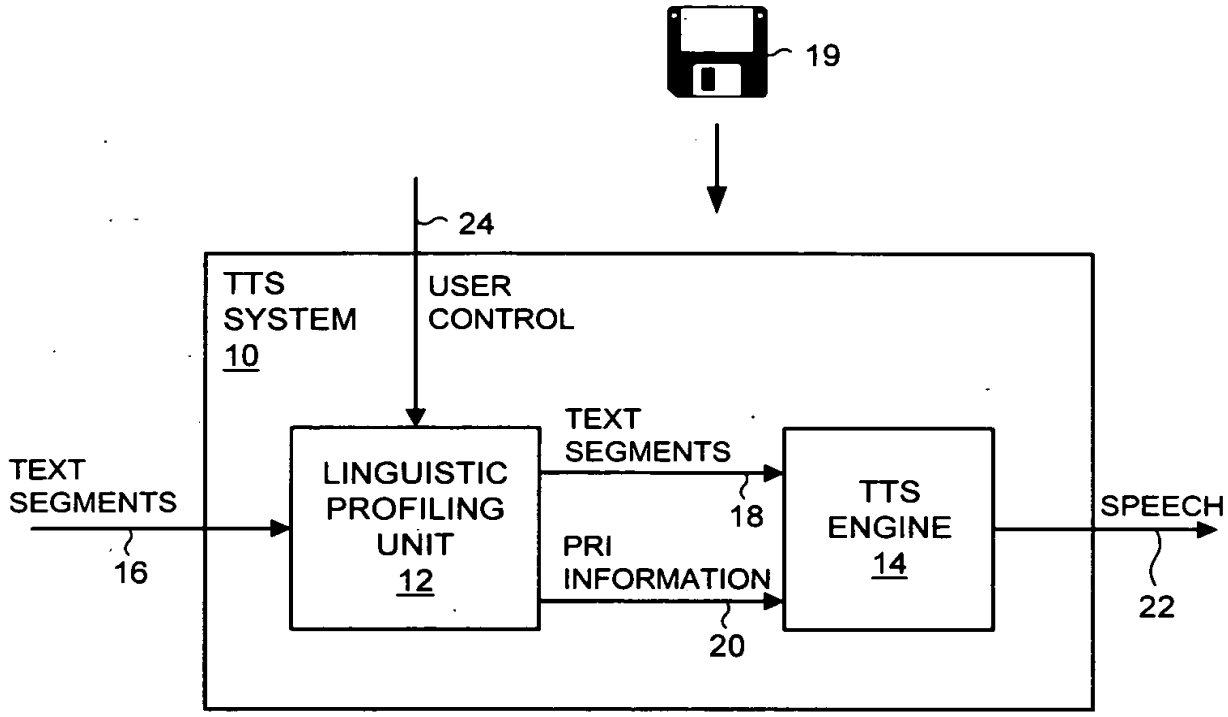
19
24
TTS
SYSTEM
10
USER
CONTROL
TEXT
SEGMENTS
16
LINGUISTIC
PROFILING
UNIT
12
TEXT
SEGMENTS
18
PRI
INFORMATION
20
TTS
ENGINE
14
SPEECH
22

FIG. 1

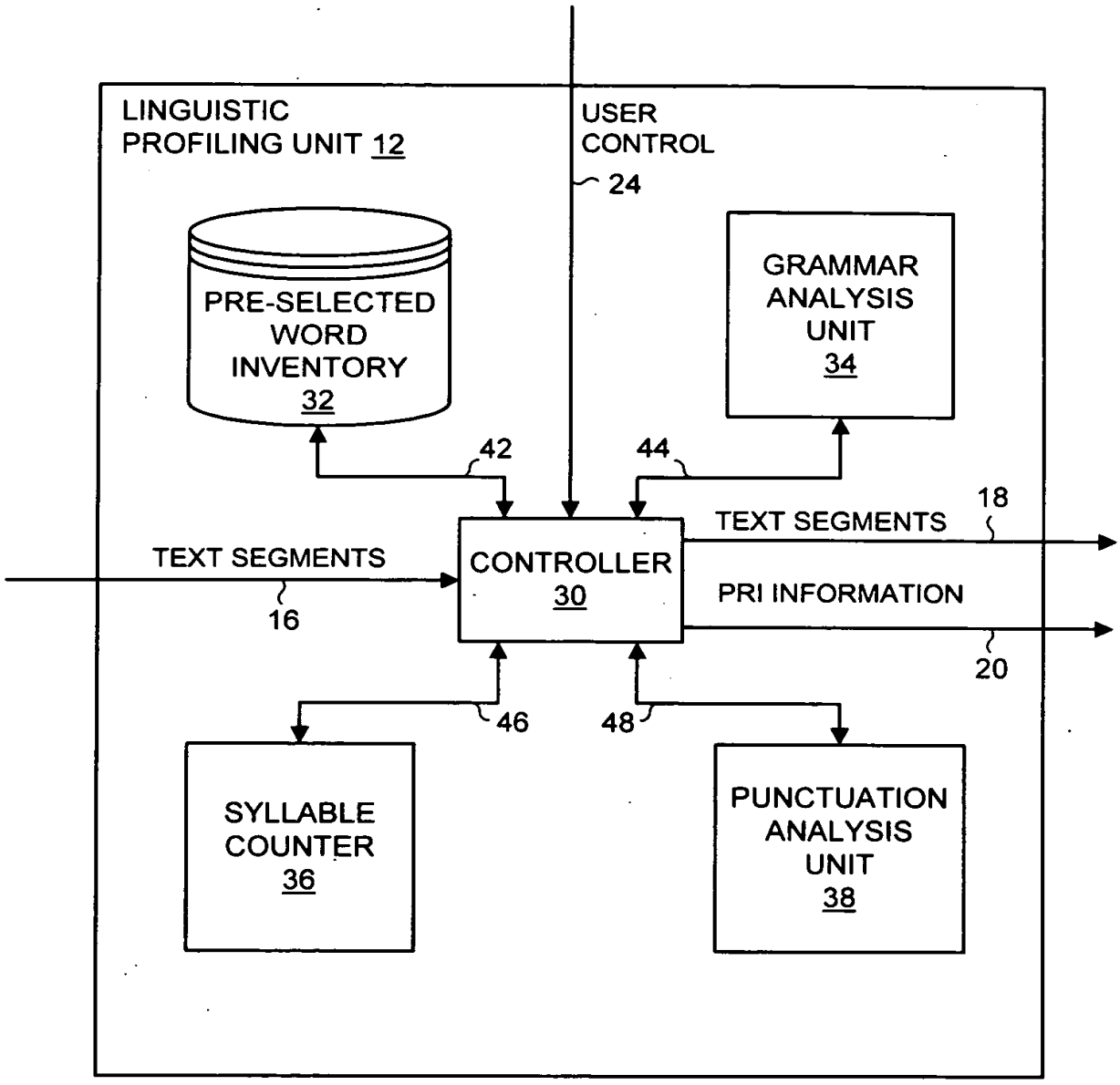
LINGUISTIC
PROFILING UNIT 12
USER
CONTROL
24
PRE-SELECTED
WORD
INVENTORY
32
GRAMMAR
ANALYSIS
UNIT
34
42
44
18
TEXT SEGMENTS
TEXT SEGMENTS
16
CONTROLLER
30
PRI INFORMATION
20
46
48
SYLLABLE
COUNTER
36
PUNCTUATION
ANALYSIS
UNIT
38

FIG. 2

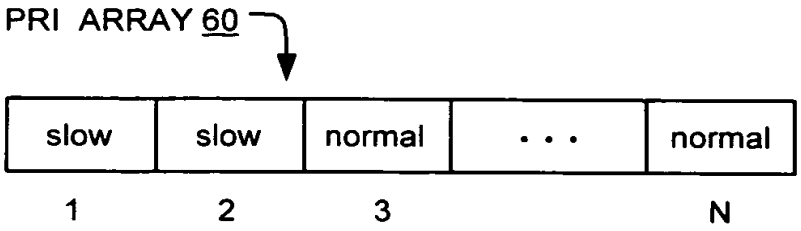
PRI ARRAY 60
slow
slow
normal
• • •
normal
1
2
3
N

FIG. 3

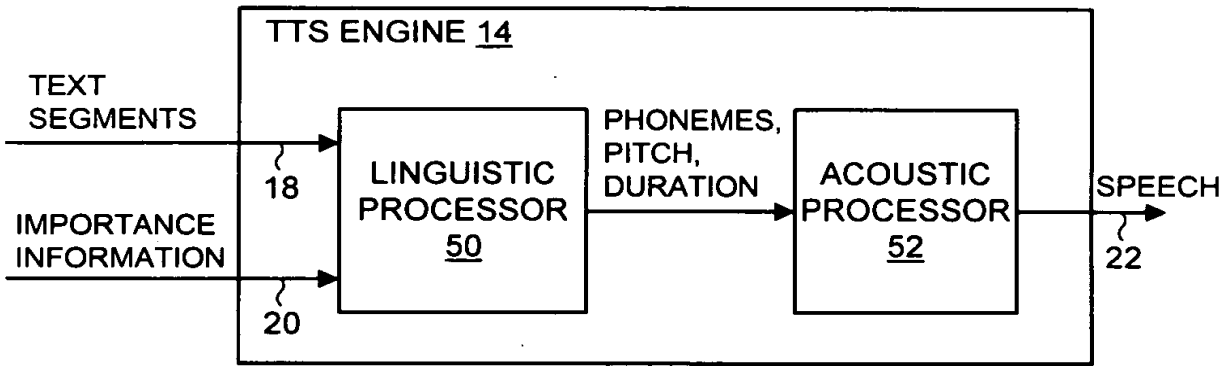
TTS ENGINE 14
TEXT SEGMENTS
IMPORTANCE INFORMATION
18
20
LINGUISTIC PROCESSOR 50
PHONEMES, PITCH, DURATION
ACOUSTIC PROCESSOR 52
SPEECH
22

FIG. 4

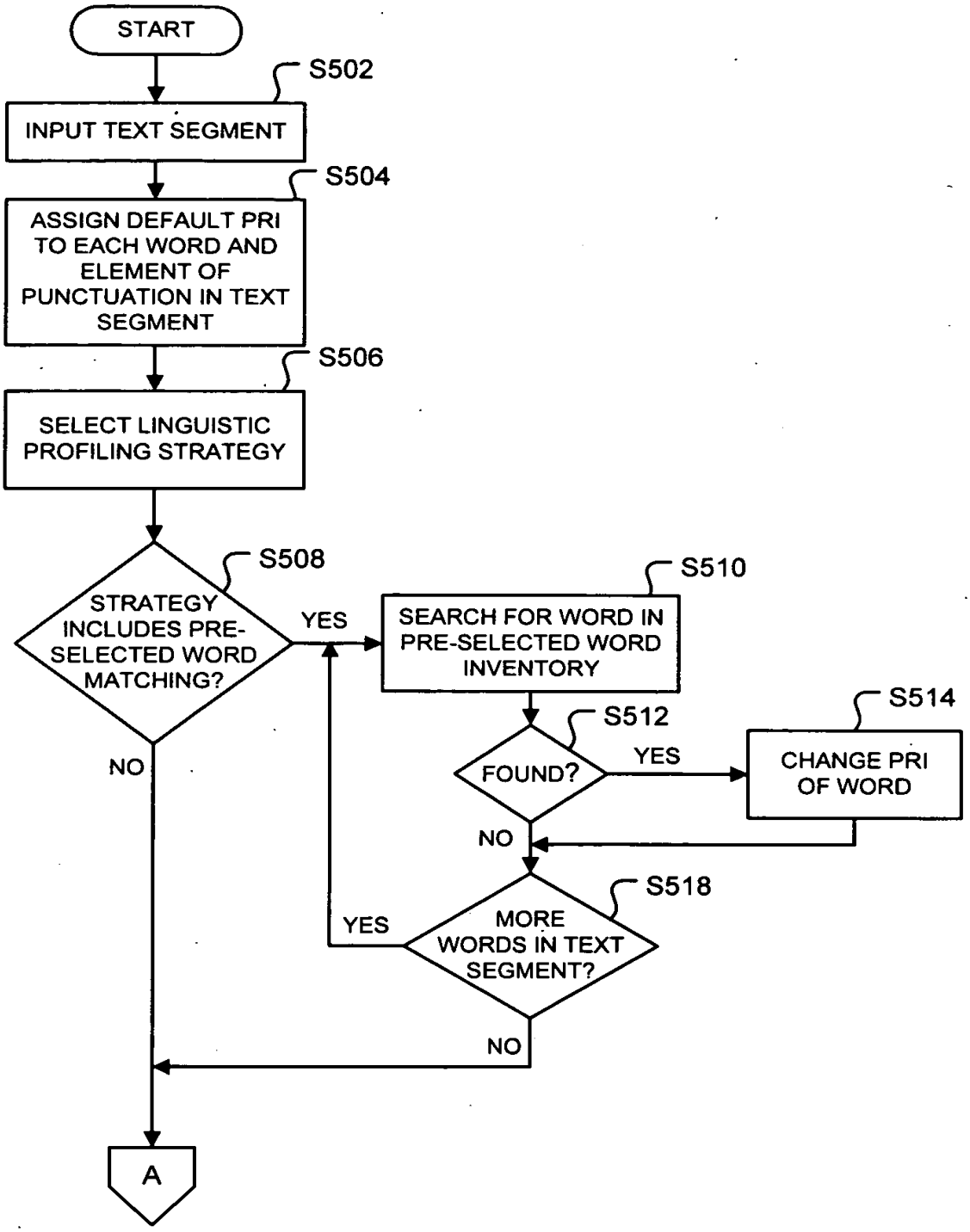
START
S502
INPUT TEXT SEGMENT
S504
ASSIGN DEFAULT PRI TO EACH WORD AND ELEMENT OF PUNCTUATION IN TEXT SEGMENT
S506
SELECT LINGUISTIC PROFILING STRATEGY
S508
STRATEGY INCLUDES PRE-SELECTED WORD MATCHING?
YES
NO
S510
SEARCH FOR WORD IN PRE-SELECTED WORD INVENTORY
S512
FOUND?
YES
NO
S514
CHANGE PRI OF WORD
S518
MORE WORDS IN TEXT SEGMENT?
YES
NO
A

FIG. 5A

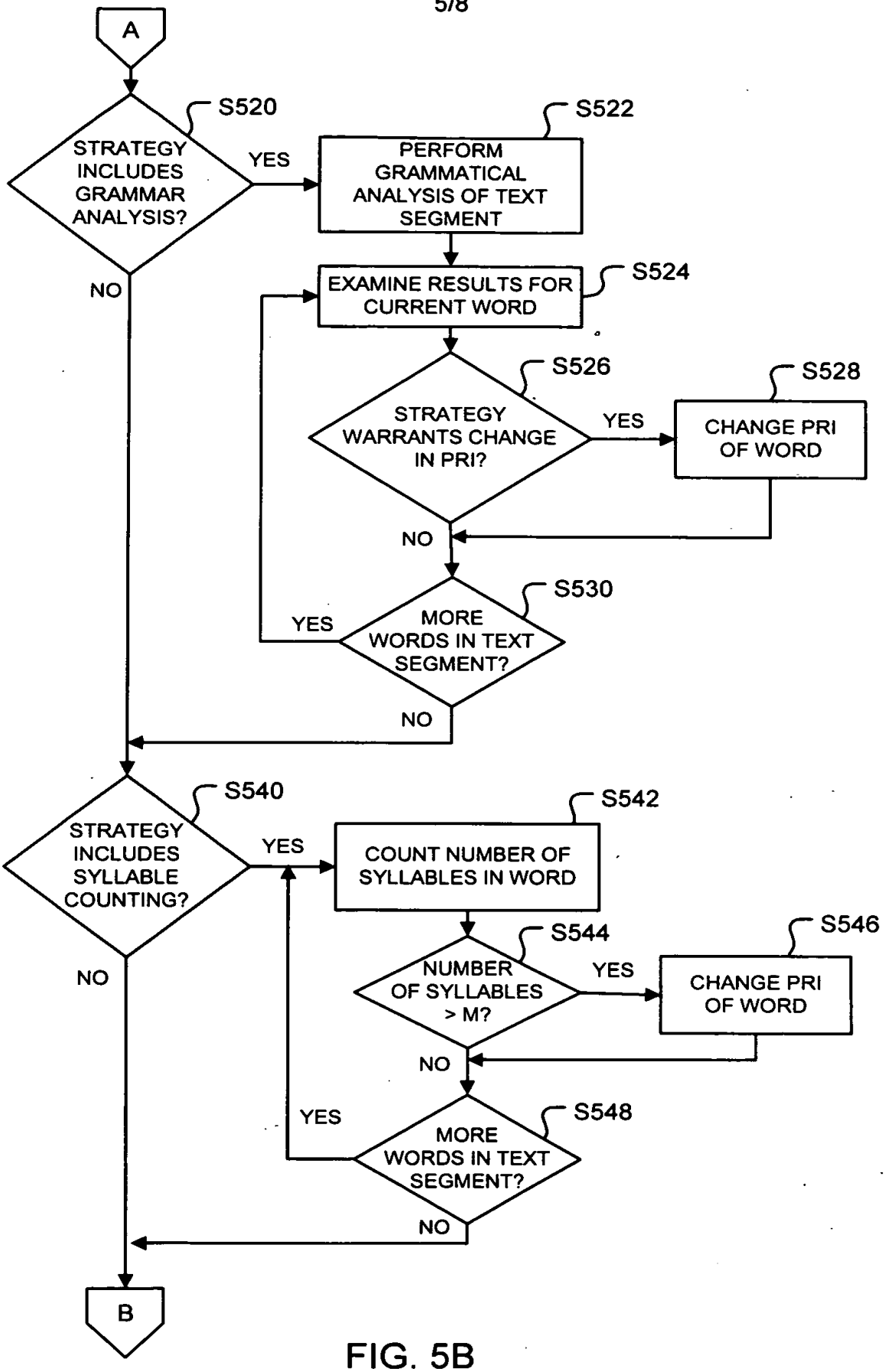
A
S520
STRATEGY INCLUDES GRAMMAR ANALYSIS?
YES
S522
PERFORM GRAMMATICAL ANALYSIS OF TEXT SEGMENT
NO
S524
EXAMINE RESULTS FOR CURRENT WORD
S526
STRATEGY WARRANTS CHANGE IN PRI?
YES
S528
CHANGE PRI OF WORD
NO
S530
MORE WORDS IN TEXT SEGMENT?
YES
NO
S540
STRATEGY INCLUDES SYLLABLE COUNTING?
YES
S542
COUNT NUMBER OF SYLLABLES IN WORD
NO
S544
NUMBER OF SYLLABLES > M?
YES
S546
CHANGE PRI OF WORD
NO
S548
MORE WORDS IN TEXT SEGMENT?
YES
NO
B

FIG. 5B

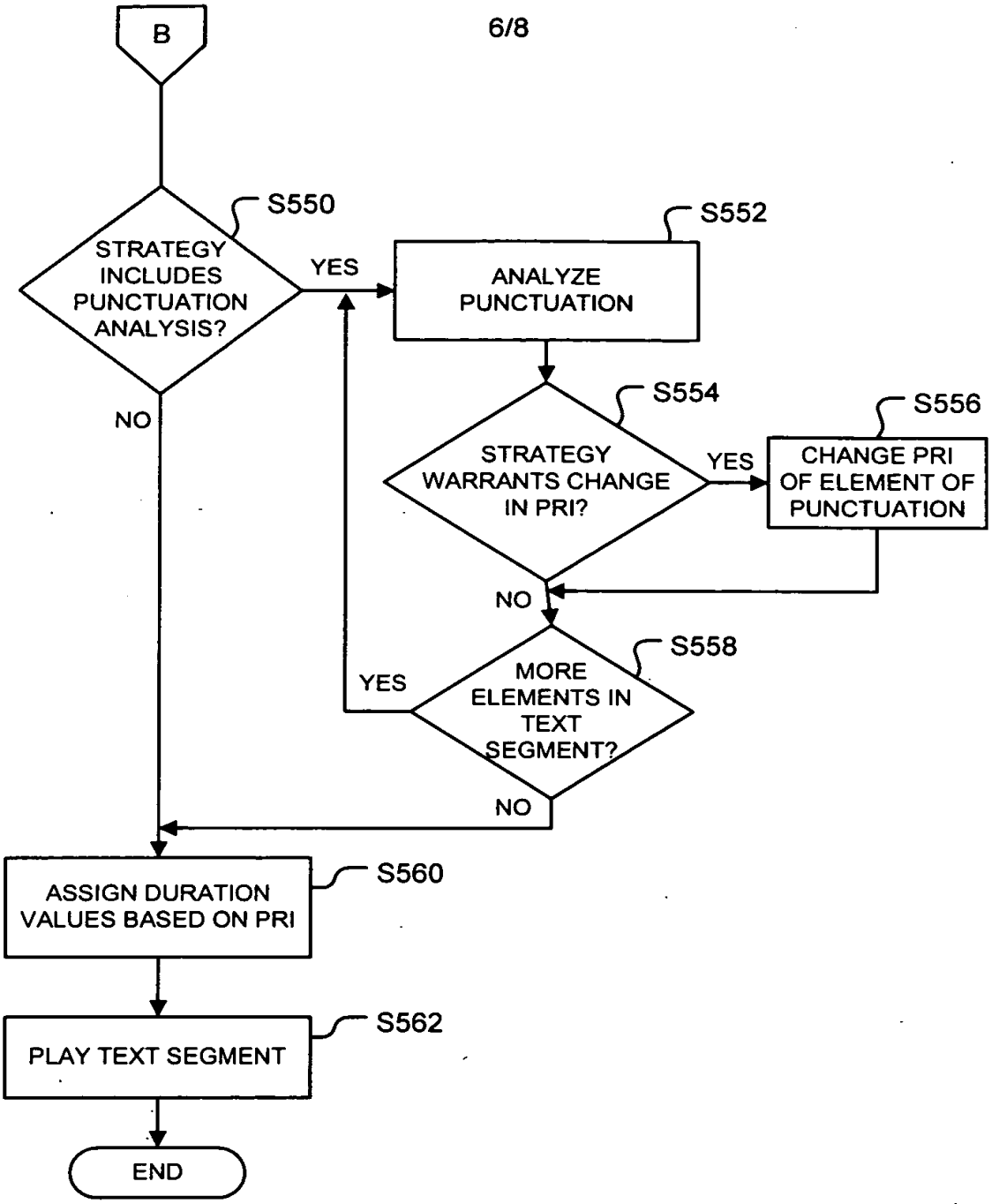
B
S550
STRATEGY INCLUDES PUNCTUATION ANALYSIS?
YES
NO
S552
ANALYZE PUNCTUATION
S554
STRATEGY WARRANTS CHANGE IN PRI?
YES
S556
CHANGE PRI OF ELEMENT OF PUNCTUATION
NO
S558
MORE ELEMENTS IN TEXT SEGMENT?
YES
NO
S560
ASSIGN DURATION VALUES BASED ON PRI
S562
PLAY TEXT SEGMENT
END

FIG. 5C

PRI ARRAY (INITIAL)

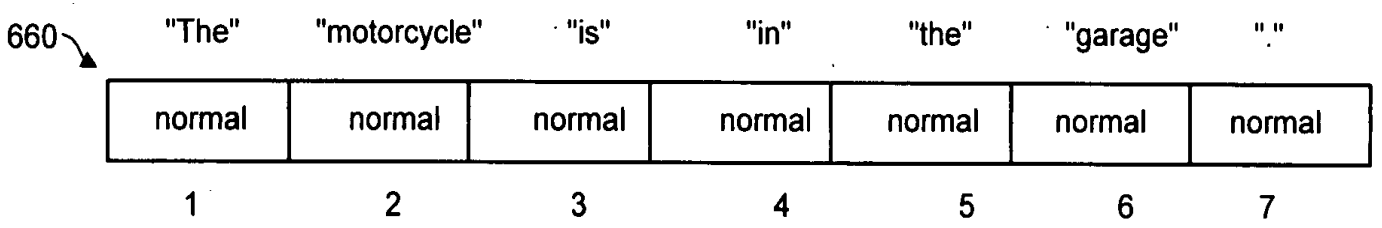

FIG. 6A

PRI ARRAY (AFTER LINGUISTIC PROFILING)

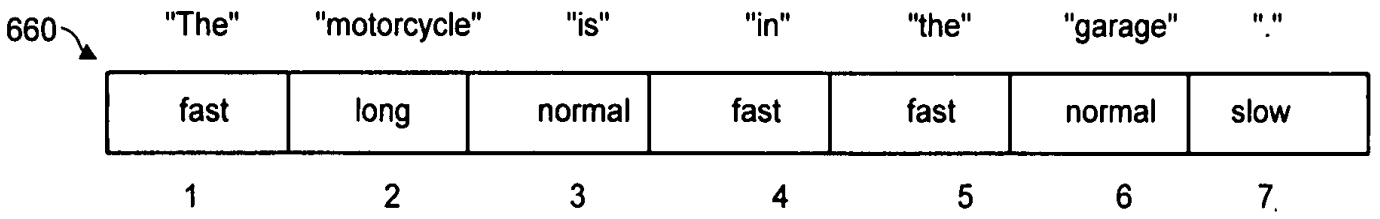

FIG. 6B

OBJECT-DESIGNED

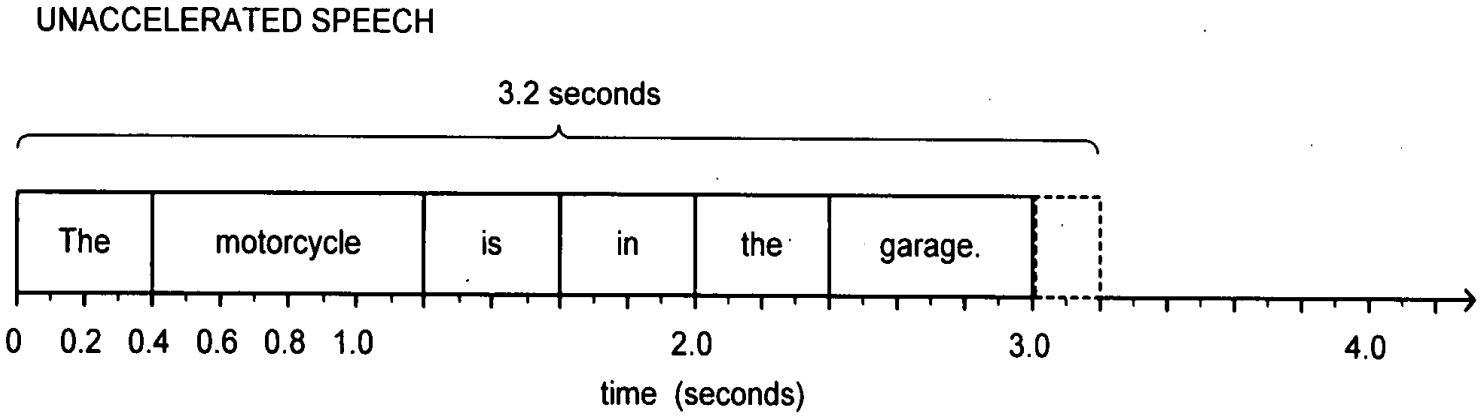

FIG. 7A

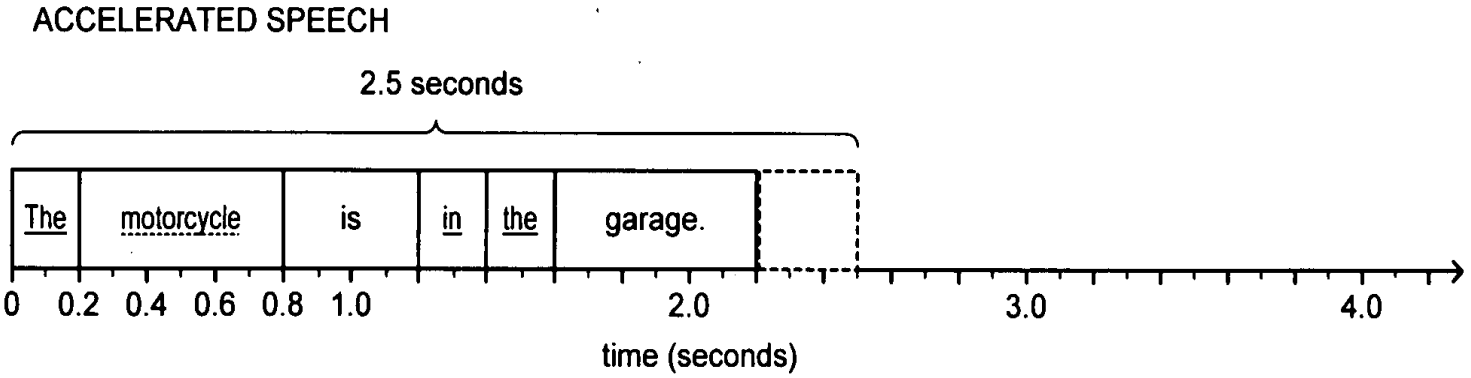

FIG. 7B